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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/628,922	07/31/2000	Manfred Hahl	4648 US	5000

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EXAMINER
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NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/628,922

Applicant(s)

HAHL, MANFRED

Examiner

Jennifer T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 July 2000.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4,15,18 and 19 is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7-14,16,17,20,21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This office action is responsive to amendment filed on 8/30/04.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 6, 7, 10, 13, 14, 16, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deter (Patent No. US 5,864,432), Weber et al. (Patent No. US 6,325,524) in view of Salam (Patent No. US 6,346,771).

Regarding claims 1 and 16, referring to Figs. 1, 3 and 5, Deter teaches a color head-up display, in particular for vehicles, in which the light from a light source (13) is transmitted through an at least partially light transmitting display (6) and is projectable onto a windshield (9), wherein a multiplicity of red, a blue and green light emitting diode are arranged without packing on a common support (from col. 11, line 37 to col. 12, line 36).

Deter differs from claims 1 and 16 in that he does not specifically teach the light source is a multiplicity of red, a multiplicity blue and a multiplicity green light emitting diode and wherein the common support comprises a thermally conductive heat distributing support extending a long an array of the diodes for supporting the diodes, the heat-distributing support serving as a heat-dissipating device for cooling the light-emitting diodes, wherein the individual light-emitting diodes are chip pads fitted on a metallic support material array. However, referring to Fig. 4, Weber teaches a light source comprises a multiplicity of red, a multiplicity blue and a

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multiplicity green light emitting diodes (31-33) and a common support comprises a thermally conductive heat distributing (34) support extending a long an array of the diodes (31-33) for supporting the diodes, the heat-distributing support serving as a heat-dissipating device for cooling the light-emitting diodes (col. 2, lines 40-44, col. 3, lines 1-3) and referring to Fig. 1, Salam teaches individual light-emitting diodes are chip pads fitted on a metallic support material array (3) (col. 3, lines 14-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the heat sink for LEDs as taught by Weber and the metal support as taught by Salam in the system of Deter in order to protect the light emitting diodes and increase the life time of the light source device.

Regarding claims 2 and 3, referring to Fig. 5, Deter further teaches multiplicity of light emitting diodes is arranged in the form of a compact array in that the compact array is configured in the form of a matrix (col. 12, lines 4-23).

Regarding claim 7, the combination of Deter, Weber and Salam teaches a bonding wire is connected to said chip pad and to the support material array (Fig. 2 of Salam).

Regarding claim 10, Deter further teaches the color head-up display wherein the at least partially light-transmitting display (6) is a liquid crystal display (col. 11, lines 40-41).

Regarding claim 13, Deter further teaches the color head-up display wherein a condenser lens (5) is arranged between the light source (13) and the display (6) (Fig. 3, col. 9, lines 63-66).

Regarding claim 14, Deter also teaches that the color head-up display wherein light from the light emitting diode (13) is reflected by one or a plurality of mirrors (5, 8) and is transmitted through the display (6) (from col. 11, line 37 to col. 12, line 36).

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Regarding claim 17, Deter further teaches the light emitting diodes are arranged in rows and columns on said support (col. 12, lines 4-23 of Deter).

Regarding claim 20, Deter teaches electrical connections provided to the multiplicity of red light emitting diodes, to the multiplicity blue light emitting diodes and to the multiplicity green light emitting diodes enable electrical activation of the diodes to attain a desired coloration to the display (col. 12, lines 25-35).

4. Claims 5, 8, 9, 12, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deter (U.S. Patent No. 5,864,432), Weber et al. (Patent No. US 6,325,524) in view of Salam (Patent No. US 6,346,771), and further in view of Lys et al (U.S. Patent No. 6,211,626).

Regarding claim 5, the combination of Deter, Weber and Salam teaches all the limitations except the multiplicity of LEDs are formed on a large round form. However, referring to Fig. 8, Lys teaches multiplicity of light-emitting diodes (15) is arranged in the form of an array has a large round form (37) (from col. 12, line 66 to col. 13, line 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the compact array has a large round form as taught by Lys in the system of the combination of Deter, Weber and Salam in order to provide a simple manner in the bonding of the individual diodes and obtain the most utilized luminous intensity of the light emitting diodes when the light is transmitted through a lens optical arrangement, by this way, the material and energy are saved.

Regarding claim 8, the combination of Deter, Weber, Salam and Lys teaches a plurality of said light emitting diodes (15) are connected in series (from col. 12, line 66 to col. 13, line 5 of Lys).

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Regarding claims 9 and 21, the combination of Deter, Weber, Salam and Lys further teaches a plurality of said light emitting diodes (15) of one color is connected in series (from col. 12, line 66 to col. 13, line 5 of Lys).

Regarding claim 12, the combination of Deter, Weber, Salam and Lys teaches separately control the individual color of the light emitting diodes can be successively a rapidly change in this impulse; accordingly the display is obtain a monochrome display (from col. 12, line 66 to col. 13, line 5 of Lys).

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deter (U.S. Patent No. 5,864,432), Weber et al. (Patent No. US 6,325,524) in view of Salam (Patent No. US 6,346,771), and further in view of Saito et al (Japan Pub. No.: 06-172616).

Regarding claim 11, the combination of Deter, Weber, and Salam differs from claim 11 in that it does not specifically teach the display is a color liquid crystal display. However, Saito teaches the display is a color liquid crystal display (D1) ([0011]-[0017]). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the display is a color liquid crystal display as taught by Saito in the system of the combination of Deter, Kuwayama, Yamamura, Kawakami in order to enables a simple color representation.

6. Claims 4, 15, 18, and 19 are allowed.

7. Applicant's arguments with respect to claims 1-5 and 7-21 have been considered but are moot in view of the new ground(s) of rejection.

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8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Nguyen  
06/24/05

  
REGINA LIANG  
PRIMARY EXAMINER